



YUROK TRIBE

190 Klamath Boulevard • Post Office Box 1027 • Klamath, CA 95548

January 29, 2015

David Murillo
Bureau of Reclamation
Mid-Pacific Region, Regional Director
2800 Cottage Way
Sacramento, CA

Re: Yurok Comments on Bureau of Reclamation's Final Draft Long Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River

Dear Mr. Murillo:

Thank you for the opportunity to comment on the Draft Long Term Plan for Protecting Late Summer Adult Salmon in the Lower Klamath River (Plan). The following comments are primarily technical in nature, but the Tribe looks forward to meeting with the Bureau of Reclamation on a government-to-government basis regarding the legal and policy implications of this plan in the near future.

General Comments

While the Yurok Tribe supports the idea of flow augmentation in the short-term as an emergency stopgap measure to prevent imminent fish kill events, a more comprehensive view must be taken for the long term health of the river. We think that the reason the river is currently subject to outbreaks of ich -- such as the one that caused the fish kill event in 2002 and the most recent one in 2014 -- is that the physical, biological and ecological functions of the river have been significantly altered to the point where every year of dry hydrological conditions the river is at risk of juvenile and adult disease outbreaks. For the long-term, co-managers need to work toward addressing the root causes of the issues that have caused the Klamath River to reach this point. Prior to these large-scale issues being resolved, flow augmentation is our primary tool for preventing fish kills.

More specifically, we need implementation of landscape-scale tasks such as removal of the Klamath River dams, large-scale water quality improvements, habitat restoration, and improved water management, all issues addressed within the Klamath Basin agreements. These actions will move the Klamath and Trinity River ecosystem toward more natural

function. Such improved conditions would allow ecological attributes such as fall Chinook run timing to be restored to its former characteristics. Scientific evidence shows that artificially high water temperatures in the late summer and early fall caused by PacifiCorp's dams on the Klamath River cause a significant migration delay in early returning fall-run Chinook salmon. These altered upper river temperatures have resulted in a constriction of run timing and contributed to fall Chinook holding in warm, crowded conditions that are ideal ich breeding grounds. Dam removal, large-scale water quality improvements in the upper Klamath River Basin, and fisheries restoration are an important first step toward fixing the problem of recurring ich infections at a fundamental causative level rather than a reactionary response.

Proposed Action

We support flow augmentation, however the criteria proposed by the Bureau of Reclamation (Section 4) are too conservative, and will lead to continued ich outbreaks and probable fish kill events. For example, if the criteria on page 15, paragraph 2 were followed last year, no augmented flows would have been released, and a fish kill event would likely have occurred. Even with preventative and emergency flow releases last year, ich reached very high levels and the river narrowly escaped a fish kill event.

Under current ecological conditions, available scientific evidence supports flow augmentation to at least 2500 cfs as measured at the USGS gage Klamath River near Klamath (KNK), regardless of run size. In addition, the events and data collected last year indicate that catching an ich outbreak early and acting very quickly are of paramount importance.

If the run size is predicted to be over 170,000 fish, the available scientific evidence (i.e. Strange 2010) supports a 2800 cfs release rather than a 2500 cfs release as called for in the Plan. If the run size is forecast to be extremely large (>225,000 fish), then we recommend a release of 3200 cfs at KNK.

The Plan should allow for additional criteria for flow augmentation to be developed by a team of technical experts of the Co-managers of the Klamath Basin. This group would look at issues such as the following:

1. What levels of ich detection are appropriate to trigger a modest increase in flows (e.g. from 2,500 cfs or 2,800 cfs to 3,200 cfs), without fully implementing the emergency response of doubling flows. The rationale for this is that data collected last year indicates that ich levels can increase at an exponential rate. Initial analysis suggests that a proactive increase in flows as the levels of ich are just beginning this exponential increase could likely prevent the higher levels that were encountered during 2002 and 2014 and possibly preclude the need for an emergency release that involves doubling of the flow.

2. If, during the latter part of the spring Chinook run, water temperatures rise rapidly enough to trap adult migrating salmon and steelhead in significant numbers (>250 holding adult salmonids fish at the Blue Creek thermal refugia), due to water temperatures being above the migration threshold (22°C), then flow releases from Trinity reservoir in early or mid-July should be initiated for the purpose of lowering water temperatures to the point where these fish can disperse and not hold in the Lower Klamath for an extended period of time. We believe this management option has the potential to lower the risk of an ich epizootic outbreak.

Research and Monitoring

A major shortcoming of the Plan is that it does not explicitly call for a rigorous scientific monitoring and research effort to better understand causes of these episodic ich outbreaks. It is our goal to return the river to the condition where flow augmentation is not necessary to protect against these outbreaks, but without an improved understanding of the life history and ecological interactions of ich in the Lower Klamath River, we are forced to manage with less than optimal knowledge. Instead, Chapter 4 contains a very vague statement that “*Many emphasized the importance of employing the principles of adaptive management to improve fish health monitoring efforts*” without a commensurate expression of commitment on the part of Bureau of Reclamation toward that principle. The Bureau of Reclamation should use this opportunity to explicitly support and set up a rigorous monitoring and research program with the goal of understanding the biological response of ich to various management alternatives, and ultimately how this problem can be addressed at an ecological level. Until we reach this understanding, augmented flows remain the only viable alternative for fish kill prevention.

Coho Salmon

There is much emphasis put on preventing a fish kill of Chinook salmon in the Plan, which is a species of utmost concern to the Yurok Tribe. However, it should also clarify that an objective of the Plan is to minimize mortality of Southern Oregon/Northern California Coastal coho salmon, a threatened species that co-occurs with Chinook salmon in the lower Klamath River during mid-September through November. It is noteworthy that during the 2002 fish kill a conservative¹ estimate of 344 coho salmon adults were among the estimate of salmonid mortalities².

¹ CDFG, 2004. September 2002 Klamath River Fish-Kill: Final Analysis of Contributing Factors and Impacts, July 2004. California Department of Fish and Game Northern California-North Coast Region The Resources Agency State of California.

² USFWS, 2003. Klamath River Fish Die-off September 2002, Report on Estimate of Mortality. Report # AFWO 01-03.

Section by Section Comments

3.1.2

Add to second bullet that increased flows from the Trinity often reduce Lower Klamath River temperatures in the late summer which slows the life cycle of the ich parasite, thereby minimizing infection rates.

Add to the third bullet that adding additional flows also adds depth to the river, thereby decreasing fish densities.

3.1.3

Should add a bullet noting ecological concerns associated with substantial deviations from a natural hydrograph.

4.1

2nd paragraph

As noted above, until the underlying causes of the disease problem are addressed, we support keeping flows at a minimum of 2,500 cfs regardless of the run size, unless real-time conditions indicate these flows are not necessary. We support convening a technical group of Klamath River Basin Co-managers to discuss the exact timing and duration of such flows.

As noted above, we support a group of technical experts considering the merits of earlier (July through the third week of August) augmentation pulses, on a pilot study basis, to lower river temperatures below the migration barrier threshold and disperse fish congregated at Blue Creek thermal refugia, if such congregations are present. The magnitude, duration, and criteria for such pulses should be recommended by this team of technical experts of the Co-Managers.

This section states that Reclamation will coordinate with Humboldt County officials concerning release of water pursuant to the 1955 Act section 2. The Yurok Tribe is a downstream user of Trinity Reservoir water as contemplated in this section of the 1955 Act. This section should specify that Reclamation will coordinate with the Tribe concerning any release of this water.

4.3.1

Recommend changing the following: “....3) release additional water, if necessary, from Trinity Reservoir (with any compensation for the additional volume determined later based authorities and mechanisms described in other sections and subject to the availability of funds).

To

“....3) release water, if necessary, from Trinity Reservoir.”

If the water is necessary to minimize the risk of a fish kill, it should be released regardless of funding levels or whether Humboldt County request the water.

5.1

BOR's authority to implement flow augmentation in the lower Klamath River under the CVPIA is not limited to section 3406(b)(1). BOR maintains authority under the CVPIA sections 3402 and 3406(b), including 3406(b)(2), to implement increased releases for flow augmentation purposes in the lower Klamath River. BOR can release water to satisfy legal obligations to fulfill the Tribe's federal reserved fishing rights and to protect fish. In addition, BOR as a trustee of the Tribe is authorized under federal law to divert water from the Trinity River Division to satisfy the Tribe's implied water rights for its fishery. Finally, the Endangered Species Act authorizes BOR to implement the flows to protect listed species, including mitigating threats to SONCC coho salmon as discussed above.

The Plan should include an explicit statement that the flows contemplated are in addition to flows under the 2000 Trinity River Record of Decision. The U.S. District Court for the Eastern District of California found in its October 1, 2014, order that past flow augmentation measures to benefit adult salmon in the Lower Klamath River are outside of the scope of the Record of Decision.

6.3.1

The second proviso of section 2 of the 1955 Act specifies, and the Solicitor's December 23, 2014, Opinion recognized, that the 50,000 acre feet authorized to be "made available to Humboldt County and downstream water users." This proviso was included in the legislation to address downstream opposition, which included Humboldt County and representatives from the lower Klamath River. The Tribe, which maintains federal reserved fishing rights, is a downstream user and can request release of such water. This section should note that the Tribe is a downstream user that may request release of this water to protect fish.

6.3.3

Should note that any consultation would involve consideration of pros and cons for multiple listed species, within and outside of the Klamath/Trinity Basin.

6.5.2

BOR has sufficient authorities to provide the water without compensating others for foregone water deliveries and power generation.

Summary

While it is encouraging that the Bureau of Reclamation recognizes the value of increased flows in managing the river to decrease the risk of ich epizootic events, it is concerning that the criteria are so conservative that no preventative flows would be released in

conditions identical to 2014, in which an actual ich outbreak occurred. Furthermore, we are concerned that the Plan does not contain a strong commitment to developing information necessary to manage these ich outbreaks at a more fundamental ecological level. While we strongly support augmented flows in the short term, we believe that a long-term approach should look at ways to return the river to restored ecological function through actions such as dam removal, large-scale water quality improvements in the Upper Klamath Basin, large-scale fish restoration and improved water management.

Sincerely;

A handwritten signature in blue ink, appearing to read "Th O'Rourke". The signature is fluid and cursive, with a prominent flourish at the end.

Thomas O'Rourke
Chairman
Yurok Tribe